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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,952	01/09/2002	Jun Ohshimo	020004	5112

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EXAMINER	
JAGAN, MIRELLYS	

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/040,952	OHSHIMO, JUN	
	Examiner	Art Unit	
	Mirellys Jagan	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,6,7,17,18,20 and 22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,6,7,17,18,20 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/2/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 6/2/04 was filed after the mailing date of the Final Rejection on 3/19/04. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Amendment

2. The amendment filed 6/2/04 under 37 CFR 1.116 in reply to the final rejection has been entered.

Allowable Subject Matter Withdrawn

3. The indicated allowability of claim 9 (now claim 7) is withdrawn in view of the newly discovered references to Kobayashi et al, which was submitted by the Applicant in the IDS filed on 6/2/04. Rejections based on the newly cited reference follow. This Office action is made **FINAL**.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 7 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent 2000011132 to Kobayashi et al [hereinafter Kobayashi].

Kobayashi discloses a light sensor comprising:

a light emitter (10) located on a first side of a space;

a light guide (30) located on a second side of the space;

a light receiver (not shown) also located on the second side of the space such that it receives light (7) emitted from the light guide;

wherein the light guide (30) takes in the light emitted from the emitter, reflects the taken-in light at a reflection portion (32) in the light guide, and ejects the light toward the receiver; the guide is plate-shaped and comprises the reflection portion (32) disposed on one of two parallel opposing faces of the guide having larger areas than the other faces thereof; the reflection portion comprises a series of parallel grooves; and the light guide takes in the light through the other of the opposing faces, reflects the taken-in light at the reflection portion (32), and ejects the reflected light from one of the other faces (36) (see figure 3).

6. Claims 4, 6, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,422,713 to Fohl et al [hereinafter Fohl].

Fohl discloses a light sensor comprising:

a light emitter (102) and a light guide (104) both located on a first side of a space;

a light receiver (116) also located on the first side of the space such that it receives light emitted from the light guide and reflected by a reflective object (90) in the space;

wherein the light guide takes in the light emitted from the emitter, reflects the taken-in light at a reflection portion (108) of the light guide, and ejects the light across the space toward the reflective object; the guide is plate-shaped and comprises the reflection portion disposed on one of two parallel opposing faces (110 and A, as shown below) of the guide having larger areas than the other faces thereof; the light guide takes in the light through one of the other faces (106), reflects the taken-in light at the reflection portion (108), and ejects the reflected light from the other (110) opposing face; the reflection portion comprises a series of parallel grooves (formed at the junction of facets 122 and regions 124); and the intensity of the light emitted is 'substantially' uniform over an entire area of the face from which the light is ejected (see figures 1, 3, and 4).

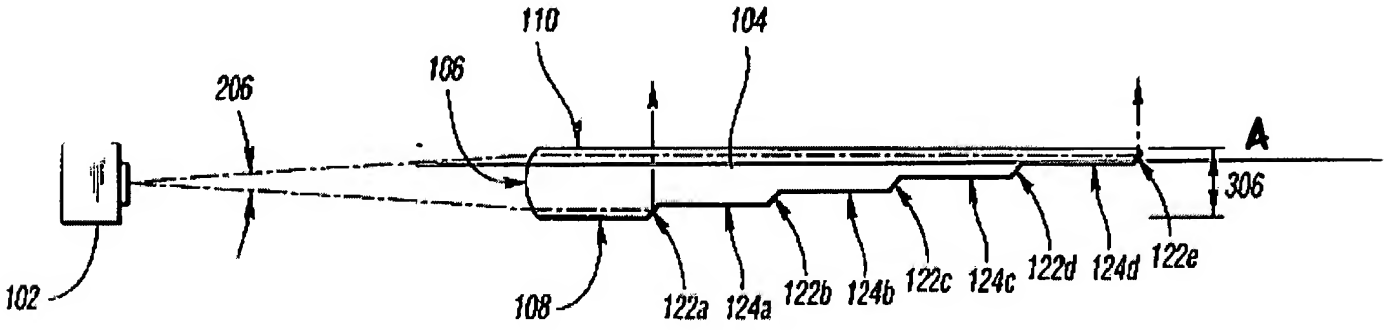


Fig. 4

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 3, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,232,592 to Sugiyama.

Sugiyama discloses a light sensor comprising:

a light emitter (1) and a light guide (5) both located on a first side of a space;

a light receiver (8) also located on a second side of the space such that it receives light emitted from the light guide;

wherein the light guide takes in the light emitted from the emitter, reflects the taken-in light at a reflection portion (3) of the light guide, and ejects the light across the space toward the receiver; the guide is a plate-shaped block that may have a rectangular cross-section thereby forming a rectangular block and comprises the reflection portion (3) disposed on one of two parallel opposing faces of the guide; the light guide takes in the light through a face (2) that is not one of the two opposing faces, reflects the taken-in light at the reflection portion (3), and ejects the reflected light from the other of the two opposing faces; the reflection portion comprises a series of parallel grooves; and the intensity of the light emitted is 'substantially' uniform over an entire area of the face from which the light is ejected (see figures 3B, 4, and 6; and column 5, lines 9-11).

Sugiyama teaches that the guide is elongated and may have a rectangular, trapezoidal, or other similar shape. In the case of a rectangular cross-sectional area, the guide is an elongated

rectangular block forming a first pair of parallel elongated faces, two other parallel elongated faces with a smaller surface area than the first pair of parallel elongated faces, and two parallel end faces having smaller surface areas than all of the elongated faces. However, Sugiyama is silent with respect to the cross-sectional orientation of the rectangular block and therefore is silent as to which pair of the parallel elongated faces of the reflection portion is located, i.e., that the reflection portion is located on the first pair of parallel elongated faces.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Sugiyama by locating the reflection portion on one of the first pair of parallel elongated faces of the block since relocating the reflection portion to one of these faces is only considered to be an obvious modification of Sugiyama that a person having ordinary skill in the art at the time the invention was made would have been able to provide using routine experimentation since the courts have held that there is no invention in shifting the position if the operation of the device would not be thereby modified. See ***In re Japikse***, 86 USPQ 70 (CCPA 1950). In this case, the operation of Sugiyama will not be modified by locating the reflection portion on one of the first pair of parallel elongated faces of the block since the guide will be able to transmit the light to the sensor.

Response to Arguments

9. Applicant's arguments filed 6/2/04 have been fully considered but they are not persuasive.

Applicant's arguments that Fohl fails to anticipate claim 4 because Fohl does not disclose facets that are not parallel to the opposite face of the light guide are not persuasive since this feature upon which applicant relies (i.e., facets that are not parallel to the opposite face) are not

recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See ***In re Van Geuns***, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's arguments that Fohl fails to disclose a reflection portion disposed on one of two opposing faces are not persuasive. Applicant states that "top face of the light guide 3 [are] reflection portions 3a [i.e., facets] each comprising a V groove" and that "the reflection portions 3a are arranged on the "*plane*" of the light guide 3 of figure 4". However, these arguments are not persuasive since both Applicant's reflection portions and Fohl's reflection portions are on a top face/plane "F" as shown below:

FIG. 5

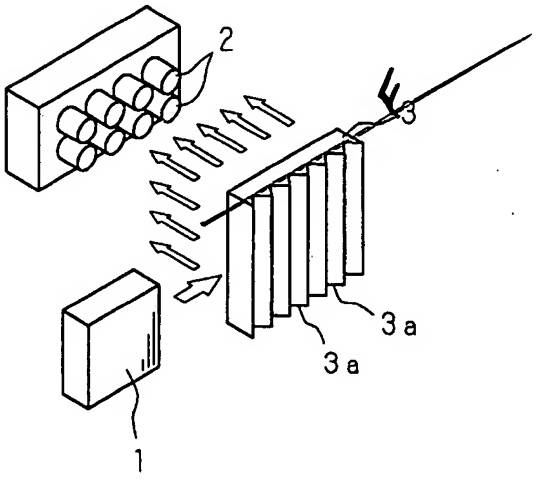
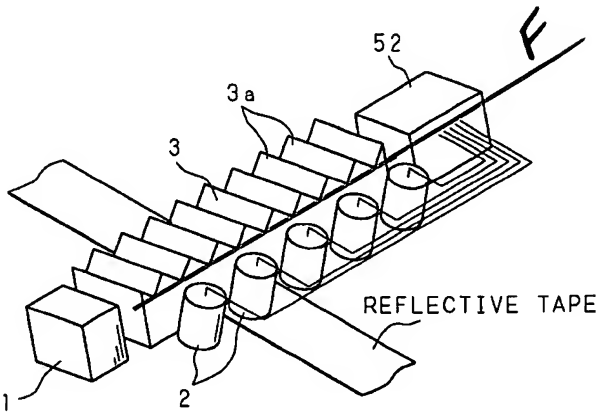


FIG. 6



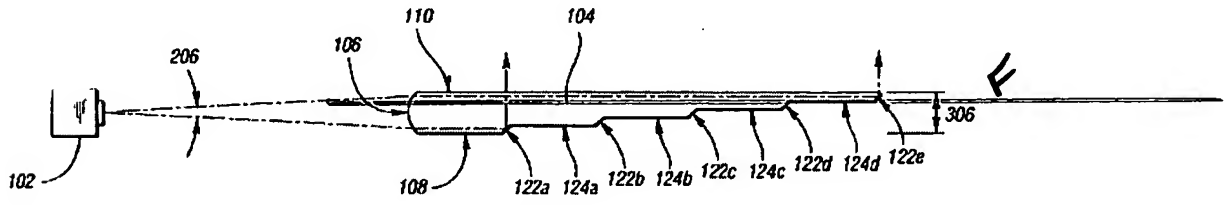


Fig. 4

Applicant's arguments that Sugiyama teaches against orienting the rectangular light guide as claimed because: 1) the reflection portion 3 is not a largest face of the light guide, 2) there is no suggestion to make the reflection portion 3 or the light emergent portion 4 wider to make the light guide rectangular, and 3) that the use of the term "columnar" by Sugiyama means "a cylindrical" shape are not persuasive since: 1) the rejections are not based on the reflection portion 3 being one of the largest faces of the light guide (the rejections are based on the reflection portion 3 being disposed on one of the largest faces of the light guide), 2) the rejections are not based on making the reflection portion and the light emergent portion wider to form the rectangular light guide (the rejections are based on making the body 2 rectangular), and 3) the term "columnar" used by Sugiyama is used to describe the light guide as being elongated, and does not preclude the light guide having cross-sectional shapes other than a circle (cylindrical), as stated in column 5, lines 9-11.

Applicant's arguments that making the light guide horizontally rectangular will prevent the light guide from efficiently guiding the light into a linear light beam are not persuasive since Sugiyama does not disclose the width of the light guide as factoring into the capabilities of the light guide to release a linear light beam. Sugiyama discloses that the width and/or shape of the reflection portion 3 relative to the length of the light guide what creates or changes a linear light beam (see column 5, lines 25-40; column 6, lines 1-32; column 6, lines 54-56; and column 7, line 65-column 8, line 8).

Furthermore, Applicant's arguments that Sugiyama teaches that the length of the light guide, i.e., the horizontal dimension, is irrelevant and does not calculate based on any horizontal dimension are not persuasive since Sugiyama teaches that the size or shape of the reflection portion can be changed based on the length of the light guide, and shows that it is relevant to an

angle of reflection, as shown by the reference letter "L" in figure 3A (see column 5, lines 25-40; column 6, lines 1-32; column 6, lines 54-56; and column 7, line 65-column 8, line 8).

10. Applicant's arguments with respect to claim 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's submission of an information disclosure statement under 37 CFR 1.97(d) with the statement set forth in 37 CFR 1.97(e)(2) and the fee set forth in 37 CFR 1.17(p) on 6/2/04 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609 (III)B(2)(a)(ii) and MPEP § 609(III)B(3). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Thursday from 8AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
June 18, 2004

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PRIMARY EXAMINER